THE UNIVERSITY OF MEMPHIS | Center for Research in Educational Policy

VIRGINIA DEPARTMENT OF EDUCATION

Evaluation of 21st Century Community Learning Centers

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Executive Summary

The 21st Century Community Learning Centers (21st CCLC) grant program provides opportunities outside of the regular school day for academic enrichment to help students meet state and local performance standards in core academic subjects. This report summarizes the results of the Center for Research in Educational Policy's evaluation of the 2010-2011 Virginia 21st CCLC programs. The purpose was to determine whether the federally-funded 21st CCLC programs were meeting Virginia's program objectives by (1) improving student academic achievement in reading; (2) improving student academic achievement in mathematics; and (3) providing opportunities for parental education. An overview of the success of centers in achieving supplemental objectives is provided in Appendix A.

Results

Data were analyzed from three main sources: (1) an online annual local evaluation survey (ALERT); (2) the Profile and Performance Information Collection System (PPICS); and (3) scores for reading and mathematics from the Standards of Learning (SOL) assessments, Virginia Alternate Assessment Program (VAAP), and Virginia Grade Level Alternative (VGLA) assessment.

For Objectives 1 and 2, the assessment data were analyzed separately by subject (reading or mathematics) using two different inferential (i.e., statistical) methods for students in grades three through eight who had two years of assessment data available (2009-2010 and 2010-2011). In both cases, students who participated in 21st CCLC for 30 or more days were matched based on several demographic variables to similar students in the control group who were eligible for, but did not participate in the program.

Two sets of analyses were conducted to address Objectives 1 and 2. One set of analyses evaluated proficiency levels (coded as either "pass" or "fail) on the SOL, VGLA, or VAAP test in reading and mathematics. However, in an effort to evaluate the more subtle or incremental improvements in student outcomes not captured by the first set of categorical analyses, which only looked at broad changes in student proficiency, a second set of analyses was carried out for

students' standardized scaled scores (z-scores) on the traditional statewide assessment (i.e., SOL).

Using proficiency levels on the SOL, VAAP, and VGLA assessments (based on the percentage scoring Proficient or Advanced) and mean (i.e., average) scaled scores on SOL assessments only, separate descriptive (noninferential) analyses were conducted for 21st CCLC participants (i.e., those with 30 or more days of attendance) and nonparticipants (i.e., eligible students with zero days of attendance) in grade three in 2010-2011 who had no prior-year test data available. These analyses also examined differences in reading and mathematics achievement between 21st CCLC participants and all Commonwealth third-grade students in the 2009-2010 and 2010-2011 school years. Comparisons between 21st CCLC participants and nonparticipants were also conducted by the following subgroups where common data were available: gender; race; economic disadvantage status; students with disabilities status; and limited English proficiency (LEP) status. Results from the grade-three-only analyses must be treated as informational only, and not as evaluative because it was not possible to incorporate data necessary to control for these students' prior-year achievement, which is known to be a significant predictor of future year achievement. In addition, there was no student-level matching between third-grade 21st CCLC participants and controls as was done in the statistical analyses. Furthermore, since the analyses were descriptive only, differences between groups were not tested for statistical significance.

The key results of the analyses are summarized below by evaluation question.

What is the nature of the Virginia 21st CCLC programs and level of participation by students?

Similar to prior years, in 2010-2011, schools operated the majority of centers, and most were open 6-15 hours per week. There were 3,892 paid and volunteer staff members across 143 centers. Most paid employees were school division teachers or nonteaching staff, while most volunteers were college and high school students or other community members. Students attending centers during 2010-2011 numbered 25,299, and almost half (45.1 percent) attended regularly (30 days or more). Students served were in Pre-Kindergarten through grade 12, with the majority in grades 3-8. The majority of students served were White or African-American. Racial/ethnic groups were represented in centers as follows: White (47 percent), African-American (39.8 percent), and Hispanic (7.1 percent). Over half of all students served by 21st

CCLC during this period were at an economic disadvantage. Students with limited English proficiency (LEP) comprised 7.2 percent of the total program enrollment, and students with special needs or disabilities represented 8.9 percent of all students served.

The total Commonwealth student membership as of September 30, 2010, was as follows: White (54.1 percent), African-American (24.1 percent), Hispanic (11.4 percent), Asian (5.8 percent), Two or More Races (4.1 percent), American Indian/Alaska Native (.3 percent), and Native Hawaiian/Pacific Islander (.1 percent). Approximately 38 percent of all students across the Commonwealth were eligible for free or reduced price lunch for the 2010-2011 school year (http://www.doe.virginia.gov/support/nutrition/statistics/free_reduced_eligibility/2010-2011/divisions/2010-2011.pdf). Across the Commonwealth, students with limited English proficiency constituted 7.2 percent of all students enrolled in 2010-2011, and students with special needs or disabilities comprised 13 percent of total enrollment during this period.

The U.S. Department of Education's primary database on public elementary and secondary education is the Common Core of Data (CCD). Conducted annually, the CCD surveys collect data about all public elementary and secondary schools, all local education agencies, and all state education agencies throughout the United States. National student enrollment data for the 2010-2011 academic year is scheduled for release in December 2011. It was not available prior to the completion of this report.

To what degree did centers meet Virginia's objectives for the program?

Objective 1: Improve Student Academic Achievement in Reading.

For students in grades three through eight who attended a 21st CCLC program for at least 30 days, the categorical and scaled score analyses showed two statistically significant impacts of 21st CCLC participation on statewide reading assessments. First, the odds of scoring proficient for students who participated in 21st CCLC in 2010-2011 were lower than that of the control students, with an effect size (-0.32) considered substantively important based on What Works Clearinghouse (WWC) standards (≥ +/- 0.25). Second, standardized scaled scores of students who participated in 21st CCLC in 2010-2011 were lower than those of the control students. While statistically significant, the effect size for the standardized scaled score difference (-0.14) would not be considered substantively important based on WWC standards. For students in grade three who did not have prior-year test scores available, the percentage of 21st CCLC participants scoring Proficient or Advanced was lower than both nonparticipants and the Commonwealth

overall and for all available subgroups in 2010-2011. In addition, grade three 21st CCLC participants had a lower mean SOL scaled score in 2010-2011 than nonparticipants overall and in all but one subgroup evaluated.

Objective 2: Improve Student Academic Achievement in Mathematics.

For students in grades three through eight who attended a 21st CCLC program for at least 30 days, the categorical and scaled score analyses both showed a statistically significant impact of 21st CCLC participation on statewide mathematics assessments, with control students outperforming participants. The effect sizes for both the proficiency (-0.53) and scaled score analyses (-0.26) were substantively important based on WWC guidelines. For students in grade three who did not have prior-year test scores available, the overall percentage of 21st CCLC participants scoring Proficient or Advanced was lower than both nonparticipants and the Commonwealth in 2010-2011, but was higher than both groups for three subgroups (American Indian or Alaska Native, Economically Disadvantaged, and Students with Disabilities) examined. Participants in the 21st CCLC program also had a lower mean SOL scaled score overall than nonparticipants in 2010-2011, but had a higher mean for two subgroups evaluated (African-American and Students with Disabilities).

Objective 3: Provide Opportunities for Parent Education.

As required by the 21st CCLC grant, centers offered General Education Development (GED) certificate programs, computer instruction, parenting skills classes, parent/child activities, and/or career development activities for parents. The majority of centers offering computer skills instruction reported having met their internally established subobjectives. In addition, about two-thirds of centers offering parent training reported having met their internally established subobjectives. A similar proportion of centers reported having met their internally established subobjectives for parent/child interaction in academic activities. Over half of centers offering career development activities reported having met their internally established subobjectives.

Student achievement data for 2011-2012 were unavailable for analysis prior to the compilation of this report.

In what ways do attendance at a 21st CCLC, type and time allocated to activities, and hours of operation predict academic achievement?

This section of the evaluation includes the results of statistical analyses of associations between various categories of center-level data and reading and mathematics outcomes of

students in grades 3-8 with two years of assessment data available. These analyses provide information that may be useful to program leaders and are summarized below.

Center-level results from analysis of reading outcomes.

The total number of activities at 21st CCLC programs had a small, but statistically significant and positive impact on standardized SOL reading scaled scores, with an increase in the number of activities being associated with higher standardized SOL scaled scores, but had no statistically significant impact on reading proficiency. The total number of hours that centers were open, the number of paid school-day teachers, the total hours of activities, and the number of days attended did not have a statistically significant impact on either reading proficiency or standardized SOL reading scores in 2010-2011.

Center-level results for mathematics.

The impact of the number of paid school-day teachers at centers and the number of days attended was statistically significant and positive for mathematics proficiency, but the magnitude of the effects were very small. In addition, the total hours centers were open had a small, but statistically significant and positive impact on standardized scaled score outcomes. Neither the total hours of activities nor the total number of activities had a statistically significant impact on either mathematics proficiency or standardized SOL mathematics scaled score outcomes in 2010-2011.

For each of the past four analysis years, there has been a decrease in the total number of unique activities that centers have offered, while the number of providers has declined in three of the four years (including the two most recent years). The mean number of unique activities fluctuated over the four-year period, but declined from 2009-2010 to 2010-2011.

What "promising practices" and challenges were identified by centers regarding the achievement of required objectives?

Grantees were asked to elaborate upon their centers' objectives that were met and the activities or promising practices that appeared to be most effective in helping them to meet these objectives. Major themes appearing in grantees' responses included the following: homework help and tutoring with nontraditional instructional curricula, including computer-based and project-based programs; family services and interactive activities; enrichment activities that enhance student engagement; caring and committed afterschool staff who maintain strong linkages with school staff; supportive structure and environment for learning; and strong

partnerships, including cultural and community-based services, field trips, and mentorships. These promising practices are each described in further detail below.

Grantees were asked to reflect upon their centers' objectives that were not met or showed mixed results and to identify challenges that could have been associated with the lower results. Major challenges appearing in grantees' responses included the following: low or inconsistent parent attendance; low or inconsistent student attendance; and difficulty maintaining alignment, engagement, and continuity with school day activities. Challenges appearing less frequently included maintaining partnership continuity, issues related to afterschool staffing, issues related to planning and communication with families, and issues related to student discipline. Transportation, scheduling, space availability, and other logistical concerns, as well as communication with afterschool staff and partners, were generally reported less frequently than in prior years as being challenges for grantees in 2010-2011.

Conclusions

Based on the statistical analyses for grades three through eight that included two years of test data, participation in the 21st CCLC program was statistically significant in predicting achievement outcomes in both reading and mathematics in 2010-2011, with negative outcomes in both proficiency and standardized SOL assessment scores across all participants.

In addition, the total number of activities in 21st CCLC programs had a statistically significant and positive influence on reading standardized scaled scores in 2010-2011. The results also suggest that more paid school-day teachers and an increase in the number of days attended in a 21st CCLC program had small, yet statistically significant and positive impacts on mathematics proficiency outcomes. Furthermore, the outcomes imply that an increase in the total hours open had a relatively small, but statistically significant and positive impact on standardized SOL assessment scores in mathematics.

Results of the descriptive analyses of outcomes for students in grade three who did not have prior-year test scores available showed that for proficiency outcomes, the percentage of 21st CCLC participants scoring Proficient or Advanced, overall, was lower than nonparticipants and the Commonwealth in 2010-2011 in both reading and mathematics. In terms of SOL scaled score outcomes in 2010-2011, 21st CCLC participants overall had a lower mean than nonparticipants in both reading and mathematics.

Evaluation of 21st Century Community Learning Centers

2010-2011

Introduction and Overview

The 21st Century Community Learning Centers (21st CCLC) grant program was established by Congress as Title X, Part I, of the *Elementary and Secondary Education Act* of *1965* (ESEA). It was reauthorized by Congress under the *No Child Left Behind Act of 2001*. The purposes of the 21st CCLC program are as follows:

- To provide opportunities outside of the regular school day for academic enrichment, including tutorial services to help students meet state and local performance standards in core academic subjects.
- To offer students a broad array of services, programs, and activities to complement academics such as drug and violence prevention; counseling programs; art, music and recreation programs; technology education; and character education.
- To offer families of students served by community learning centers opportunities for literacy and related educational development.

In 2010-2011, the VDOE provided 21st CCLC grant funds to 104 grantees that operated a total of 143 centers. The grantees provided academic and enrichment programs to students before and/or after school hours as well as during the summer at some centers. The grant program also supported grantee collaboration with parents and community partners.

Evaluation Objectives and Measures

The VDOE contracted with the Center for Research in Educational Policy (CREP) at The University of Memphis to conduct a statewide evaluation of the 21st CCLC program to meet federal requirements and to assess the extent to which local grantees met the defined programmatic objectives. The defined objectives were as follows:

Objective 1: Improve student academic achievement in reading;

Objective 2: Improve student academic achievement in mathematics; and

Objective 3: Provide opportunities for parental education.

The evaluation was structured around the following questions:

- What is the nature of the Virginia 21st CCLC grant program and level of participation by students?
- To what degree did centers meet Virginia's objectives for the program?
- In what ways do attendance at a 21st CCLC, type and time allocated to activities, and hours of operation predict academic achievement?
- What "promising practices" and challenges regarding the achievement of required objectives were identified by centers?

All grantees and their respective centers in operation in 2010-2011 were asked to participate in the evaluation. A detailed accounting of the number of students and centers originally available and subsequently included and the rationale for inclusion or exclusion in the analysis are provided in a supplemental technical report.

Three main sources of data were used in the evaluation:

1. Two years (2009-2010 and 2010-2011) of Standards of Learning (SOL), Virginia Alternate Assessment Program (VAAP), and Virginia Grade Level Alternative (VGLA) proficiency and scaled assessment scores in reading and mathematics for students in grades 3-8. In addition to the assessment scores, data regarding gender; grade; ethnicity; limited English proficiency (LEP) status and proficiency level; disability status and primary disability code; economic disadvantage status; and days of participation in the 21st CCLC program also will be included. It should be noted that students with limited English proficiency at the lowest levels of English proficiency and students with disabilities are permitted to participate in approved alternative assessments. The VAAP and VGLA alternative assessment data will be included in the analysis of proficiency-level outcomes, but only the SOL assessment will be used in the analysis of scaled score outcomes.

2. The Profile and Performance Information Collection System (PPICS) is a national Web-based data collection system that contains (a) descriptive data about grantees and their 21st CCLC program and (b) self-reported progress toward meeting performance indicators. Grantees submit information to this system at designated time periods each year.

3. Annual Local Evaluation Report Template (ALERT) is an online survey designed to supplement PPICS for this evaluation. The tool gathers additional data regarding center

activities and outcomes. Each grantee is required to submit the ALERT for each center after a full year of program implementation.

The VDOE requested that grantees submit the ALERT for their centers by August 12, 2011. Approximately 92.2 percent (118/128) of the centers submitted the online report by the initial deadline. The remainder of centers completed the report by August 24, 2011. The findings in this report reflect the full complement of centers reporting for the 2010-2011 program year (100 percent). The ALERT reports contained both quantitative and qualitative data for analysis. For PPICS data, grantees were able to begin submitting information in April 2011, and all had completed their submissions by December 2011. PPICS reports were available for 229 centers, 128 of which met the requirements for also completing the ALERT. PPICS data within the Annual Progress Report categories of operation, objectives, activities, student behavior, and partnerships were analyzed for all grantees. Student-level SOL, VAAP, and VGLA assessment data from the 2009-2010 and 2010-2011 academic years will be provided to CREP by the VDOE. The specific data sources are shown in Table 1 for each evaluation question.

Table 1. Summary of Instruments and Data Sources by Evaluation Question

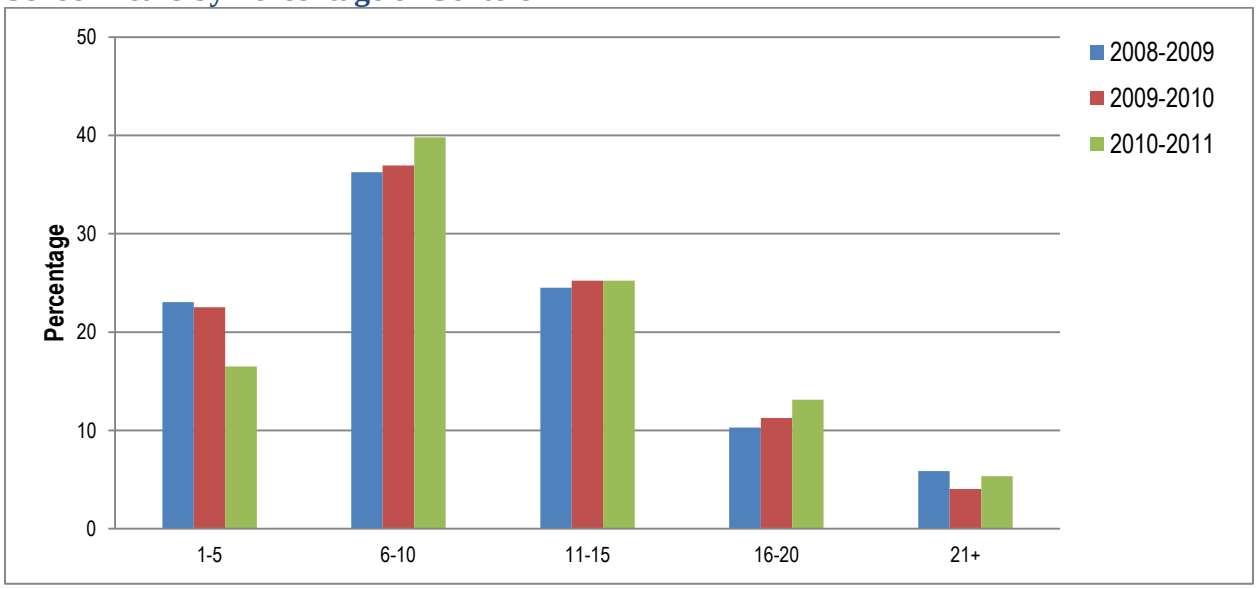
Evaluation Question	Data Sources	Percentage of Active Centers Represented
What is the nature of the 21st CCLC programs and level of participation by students?	ALERT PPICS demographic and attendance data	100%
To what degree did centers meet their objectives?	PPICS APR data ALERT Virginia SOL test scores in reading and mathematics	100%
In what ways do attendance at a 21st CCLC, type and time allocated to activities, and hours of operation predict academic achievement?	PPICS data Virginia SOL test scores in reading and mathematics	100%
What "promising practices" and challenges regarding the achievement of required objectives were identified by centers?	ALERT	100%

Center Characteristics

Operations

Among centers, 85.3 percent were operated by schools. Others were operated by community centers (6.7 percent); nationally affiliated nonprofit agencies (3.8 percent); and other agencies (units of city or county government, regional/intermediate education agencies, health-based organizations, libraries, park/recreation districts, bureaus of Indian affairs, or private schools; 3.3 percent). Slightly less than one percent of centers were operated by faith-based organizations, and no centers were operated by charter schools, colleges or universities, or for-profit entities. Percentages reported for the 2010-2011 school year were similar to those reported in PPICS for the 2008-2009 and 2009-2010 school years. Centers varied in their structure, most notably in the number of hours of operation per week (see Figure 1). These percentages are also similar to those reported for the previous year.

Figure 1: Hours of Operation per Week during the 2008-2009, 2009-2010, and 2010-2011 School Years by Percentage of Centers



About two-thirds of centers (65.1 percent) were open 6-15 hours per week during the 2010-2011 year, with the highest proportion (39.8 percent) offering 6-10 hours of services per week.

Staffing Patterns

Overall, in 2010-2011, the composition of paid staff generally continued the trends seen in prior years. The staffing patterns across centers are displayed in Figure 2 and Figure 3. Based on available PPICS data, there were 3,892 paid and volunteer staff members across the centers in 2010-2011. Of these staff members, the majority were paid (73.5 percent). Most paid employees were school division teachers (56.6 percent) or nonteaching staff (13.4 percent). Few paid employees were parents (.4 percent), college or high school students (4.9 percent), or other community members (2.8 percent). College and high school students were the most prevalent type of unpaid volunteers (44.7 percent), followed by other community members (24 percent), and then parents (10.5 percent).

Figure 2: Paid Staff in 21st CCLC across Virginia

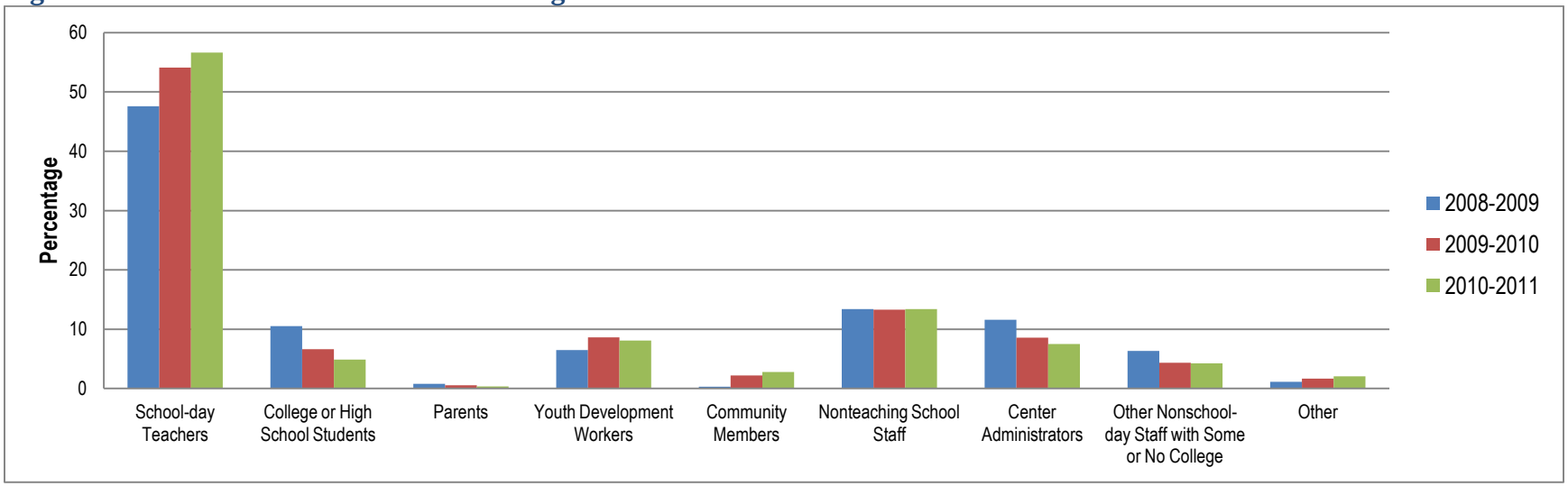
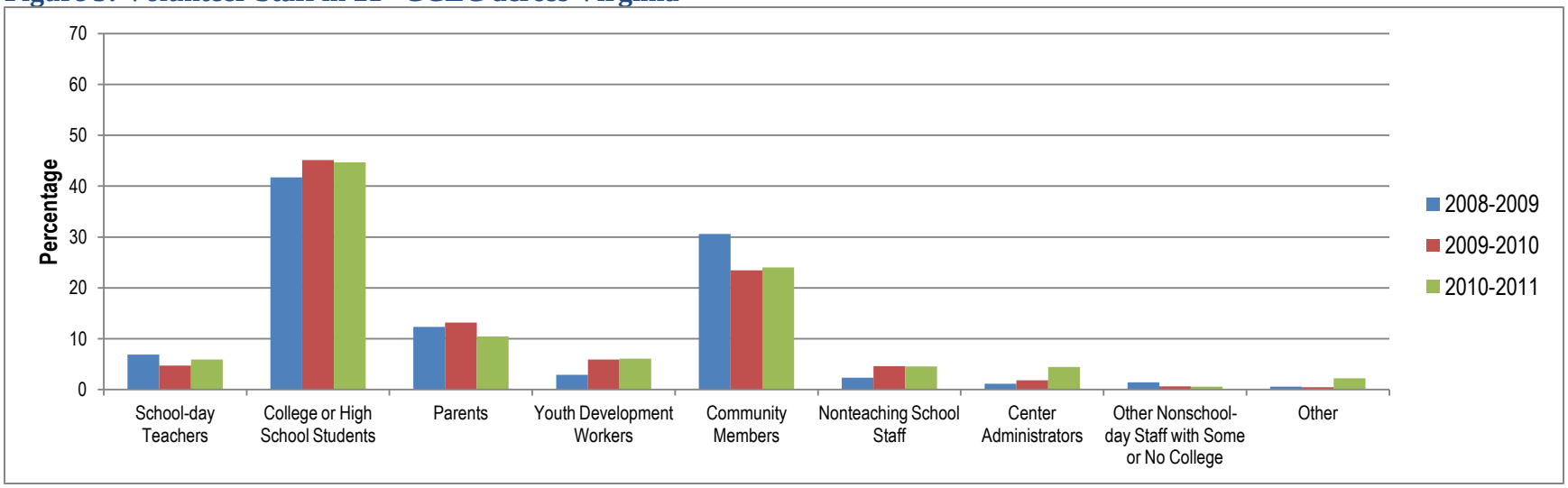


Figure 3: Volunteer Staff in 21st CCLC across Virginia



Student Participation and Attendance

According to available PPICS data, a total of 25,299 students were served in 2010-2011, with 11,076 students (43.8 percent) attending regularly (30 days or more). About two-thirds of participating students were in grades 3-8 (see Figure 4 and Figure 5). In general, percentages of both middle and high school students served and regular attendees continued to rise, while those of elementary school students continued to decline.

In comparing all student attendees reported in 2009-2010 versus those reported in 2010-2011, there was a decline in the proportion of White student attendees (40.8 percent versus 47 percent), while the proportion of African-American student attendees increased (43.7 percent versus 39.8 percent). The percentage of Hispanic student attendees in 2010-2011 was comparable to that reported in 2009-2010 (8.3 percent versus 7.1 percent). There was a slight increase in the percentage of student attendees identified as being at an economic disadvantage in 2010-2011, as compared to the previous year (58.7 percent; versus 55.9 percent reported in 2009-2010). Students with limited English proficiency (LEP) comprised 7.2 percent of the total group (a slight increase from 5.4 percent reported in 2009-2010), and students with disabilities comprised 8.9 percent (comparable to 7.6 percent reported in 2009-2010). Also, similar to prior-year reports, approximately equal numbers of boys and girls participated in the programs (49.5 percent boys, 50.3 percent girls) with approximately equal regularity of attendance.

By comparison, as of September 30, 2010, a total of 54.1 percent of students across Virginia were White, while 24.1 percent were African-American, 11.4 percent were Hispanic, 5.8 percent were Asian, 4.1 percent were two or more races, .3 percent were American Indian/Alaska Native, and .1 percent were Hawaiian/Pacific Islander (http://www.doe.virginia.gov/statistics_reports/enrollment/fall_membership/index.shtml). Approximately 38 percent of all students across the state were eligible for free or reduced price lunch for the 2010-2011 school year (http://www.doe.virginia.gov/support/nutrition/statistics/free_reduced_eligibility/2010-2011/divisions/2010-2011.pdf). Across the state, students with limited English proficiency constituted 7.2 percent of all students enrolled in 2010-2011, and students with special needs or disabilities comprised 13 percent of total enrollment during this period.

The U.S. Department of Education's primary database on public elementary and secondary education is the Common Core of Data (CCD). Conducted annually, the CCD surveys collect data about all public elementary and secondary schools, all local education agencies, and all state

education agencies throughout the United States. National student enrollment data for the 2010-2011 academic year was scheduled for release in December 2011. It was not available prior to the completion of this preliminary report.

Figure 4: Percent of All Student Attendees in 21st CCLC by Grade Level for 2008-2009, 2009-2010, and 2010-2011

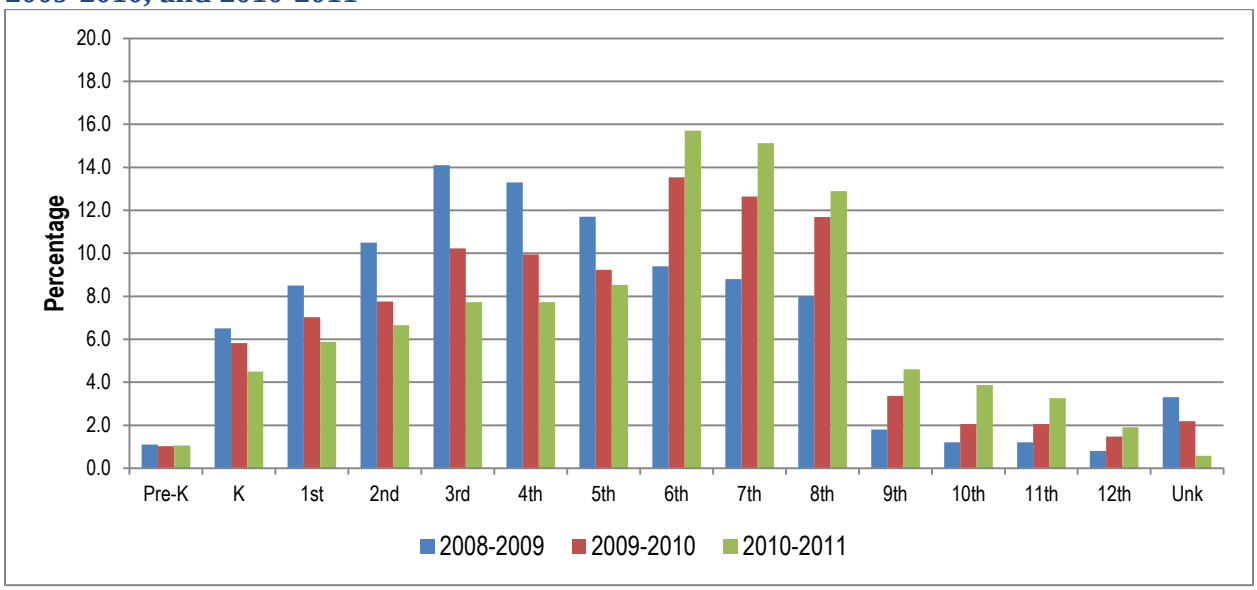
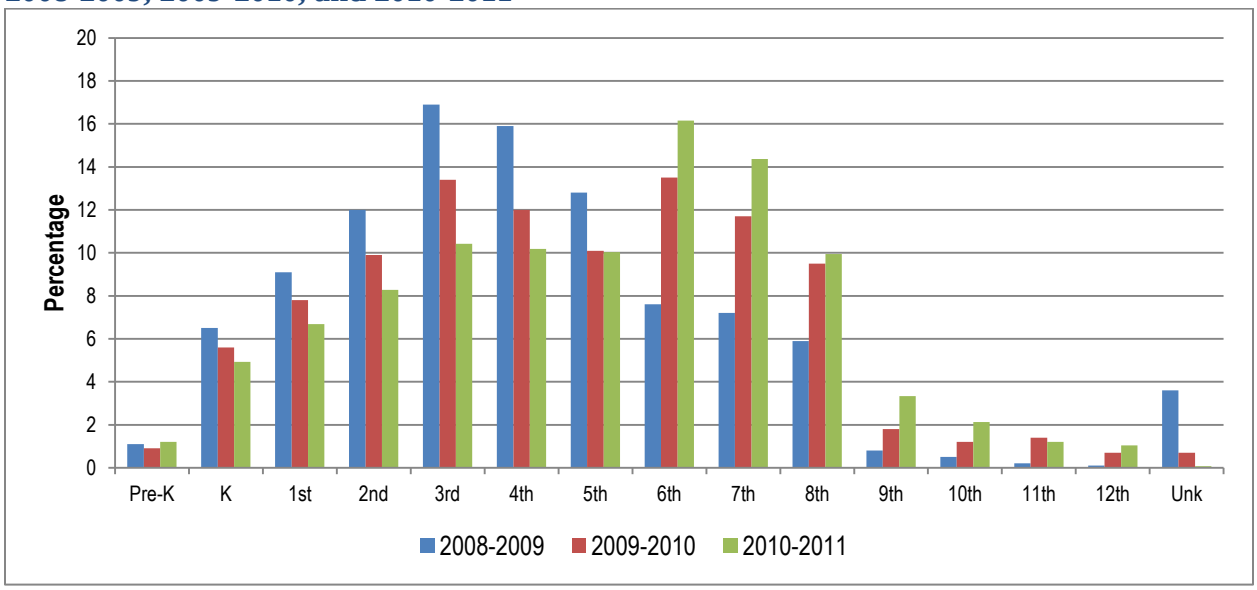


Figure 5: Percent of Regular Attendees (at least 30 days) in 21st CCLC by Grade Level for 2008-2009, 2009-2010, and 2010-2011



Methods

The results from Objectives 1 and 2 were examined using various statistical regression models for students in grades three through eight with two years of test data available by comparing matched pairs of students in a treatment group who attended 21st CCLC programs for 30 or more days and students in a control group who were eligible to attend 21st CCLC programs but had zero days of attendance.

Two sets of analyses were conducted for each subject area (reading and mathematics). The first set of analyses assessed proficiency-level performance in 2010-2011 based on all available test data (i.e., SOL, VAAP, and VGLA) using binary logistic regression. For these analyses, the proficiency level on the SOL, VAAP, or VGLA test for the 2009-2010 and 2010-2011 school years was treated as either "pass" or proficient (based on scoring "Proficient" or "Advanced Proficient"), or "fail" (based on scoring "Basic" or "Below Basic"). This method permitted the inclusion of all students, regardless of the type of assessment taken to participate in Virginia's statewide testing program, as proficiency level is a common measure across all of the different test types, grade levels, and years. By including all students in the analyses, this first method offers the most appropriate tool to analyze outcomes for specific student subgroups. As a result, the effects of 21st CCLC participation by three subgroups—students with disabilities, students with limited English proficiency, and economically disadvantaged students —were included in

the analyses of proficiency outcomes. Center-level variables (e.g., total hours open) were also included to examine the impacts of these variables on student proficiency. A total of 7,898 students were included in the binary logistic regression for reading (3,949 in the treatment group and 3,949 in the control group). A total of 7,880 students were included in the binary logistic regression for mathematics (3,940 in the treatment group and 3,940 in the control group). Additional analyses of reading and mathematics proficiency outcomes were also performed using just the reading and mathematics standardized SOL scaled scores student samples to determine if the trends in achievement were the same as in the full student samples.

While the categorical analyses were designed to capture broad impact on student proficiency associated with participation in the 21st CCLC programs, these analyses are not designed to measure incremental differences in student achievement between treatment and control students that may occur within proficiency levels. For example, students who initially scored at the low end of proficiency, but moved to the high end of proficiency would have demonstrated no measurable change in the categorical analyses because their overall proficiency level (i.e., Proficient or Not Proficient) had not changed, even though their academic achievement may have increased from one year to the next. Therefore, the second set of analyses focused on the standardized scaled scores of students who took the SOL assessments in both 2009-2010 and 2010-2011, using Ordinary Least Squares (OLS) regression. These analyses were intended to be more sensitive to these types of changes that occur across the scaled score range, regardless of students' proficiency levels. The standardized scaled score analyses also included the same center-level variables used in the categorical analyses and in terms of student subgroups, looked at the effects of 21st CCLC participation by economically disadvantaged status only. It is important to note that while the scaled score analyses are potentially more sensitive to changes attributable to program participation, they also have limitations. In particular, because students who participate in alternative assessments are not included, this type of analysis should not be used to evaluate the impact of participation in the 21st CCLC program on students with disabilities and students with limited English proficiency, as the SOL assessment outcomes for these two subgroups would not be representative of the total population of students with disabilities and students with limited English proficiency. A total of 7,190 students were included in the OLS regression for reading (3,593 in the treatment group and 3,597 in the control

group). A total of 7,395 students were included in the OLS regression for mathematics (3,687 in the treatment group and 3,708 in the control group).

Furthermore, as Virginia's tests are not vertically scaled, meaning that scores from different tests, grade levels, and years are not directly comparable in terms of measuring the amount of learning, the test-level[1] test data were converted to standardized scores (i.e., z-scores) prior to analysis. As a result, the data were placed onto a single, comparable scale while retaining the shape of the distribution of the original scores. The conversion also allowed different grade levels to be combined, so that the effectiveness of centers could be evaluated based on all students served. While this transformation is the best available approach to measuring achievement using scaled scores from multiple grades in Virginia at this time, the conversion has limitations, as z-scores only provide a measure of achievement relative to the Commonwealth average, and are not a measure of absolute growth or change from year to year. Thus, the full implications of this conversion applied to Virginia's criterion-referenced tests are not clear.

In addition, the findings can only be used to evaluate the performance of all centers in the Commonwealth as a group, and not the performance of any specific center. This is because, for both the proficiency-level analyses and the analyses of standardized SOL assessment scores, the results were aggregated across all centers rather than evaluated center-by-center. Details regarding the samples included, a complete listing of the variables used in the student matching process, and a description of the treatment-control student matching process, data sources, methodology, and scaled score standardization for the statistical analyses are found in the Supplemental Technical Report. The report is available upon request from the Virginia Department of Education.

Third Grade Only

As most students in third grade have no prior-year test data available, it was not feasible to apply inferential statistics to these data, because any statistically significant differences between 21st CCLC participants (i.e., those with 30 or more days of attendance) and nonparticipants (i.e., eligible students with zero days of attendance) may not be the results of 21st CCLC. Rather, differences could be the result of differences in prior ability because it was not possible to either (1) determine if the participant and nonparticipant groups were similar on prior-year

[1] The test level is the achievement test level independent from grade level. Therefore, students' scores were standardized based on the test level of the test they took, not the grade level in which they were enrolled.

achievement, or (2) adjust 2010-2011 outcomes based on prior-year achievement for the third-grade students. Consequently, separate descriptive (noninferential) analyses were conducted for 21st CCLC participants and nonparticipants in grade three in 2010-2011 who had no prior-year test data available. The analyses used the proficiency levels on the SOL, VAAP, and VGLA assessments (based on the percentage scoring Proficient or Advanced) and mean (i.e., average) scaled scores on SOL assessment tests. For these analyses, it would be more appropriate to use the findings to better understand whether the program is serving students with an identified need (i.e., serving students on average who are the lowest achievers) vs. interpreting the findings as an evaluation of the effectiveness of the 21st CCLC program. In other words, the outcomes should be used to learn more about the population being served rather than evaluating their outcomes. These analyses examined differences in reading and mathematics achievement between the following:

(1) 21st CCLC participant and nonparticipant third-grade students; and

(2) 21st CCLC participants and all Commonwealth third-grade students (where similar data were available).

In addition to the comparisons between all students in the 21st CCLC participant and nonparticipant groups, as well the Commonwealth, comparisons between these three groups were also conducted by the following subgroups where common data were available: gender; race; economic disadvantage status; disability status; and LEP status. The results for the grade-three-only analyses must be viewed as quite limited, as they are descriptive only; thus, it is possible that differences in achievement between participants and nonparticipants could be due to differences in areas such as prior ability or motivation, or due to chance, and may not be related to participation in the 21st CCLC program itself. Comparison data for Virginia were based upon the 2009-2010 and 2010-2011 state report card data from the VDOE's Web site at the following link: https://p1pe.doe.virginia.gov/reportcard/.

Results

The results of the evaluation reflect the extent to which the centers met required programmatic objectives. Grantees were required to address the following three objectives: (1) improve student achievement in reading; (2) improve student achievement in mathematics; and (3) provide opportunities for parental education. Each center could also implement additional objectives as long as they were aligned with the purposes of the federal 21st CCLC program.

Although the progress toward meeting the supplemental objectives was not the primary focus of the evaluation, results are provided in Appendix A for informational purposes. It is important to note that grantees determined and self-reported their individual levels of success in meeting objectives not related to student achievement based on their own criteria.

Objective 1: Improve Student Academic Achievement in Reading.

When looking at all participants in grades three through eight as a group, taking part in 21st CCLC programs for at least 30 days had a statistically significant and negative effect overall on participants' proficiency levels, as well as their standardized SOL scores. Specifically, after controlling for prior-year proficiency, student demographics, and center characteristics, control students had 70 percent higher odds of scoring proficient in reading in 2010-2011 compared to 21st CCLC participants, and had an average standardized reading SOL scaled score that was .135 standardized scaled score points higher in 2010-2011. The What Works Clearinghouse (WWC) has adopted the Cox's log odds ratio index for dichotomous outcomes (e.g., proficient or not proficient), which provides an effect size similar to the Hedges' *g* effect size (i.e., standardized mean difference), allowing a measure of the magnitude of the difference between groups. Therefore, following WWC guidelines, the effect size based on the 70 percent higher odds for control students scoring proficient would be -0.32, a "substantively important" effect (i.e., ≥ +/- 0.25) in favor of control students. The Hedges's *g* effect size based on the standardized SOL scaled score difference was -0.14, which is not substantively important based on WWC guidelines. None of the impacts of participation by subgroup (students with a disability, students with limited English proficiency, or by economically disadvantaged status) were statistically significant.

For the secondary analysis of proficiency outcomes using the same student sample from the reading standardized SOL scaled score evaluation, similar results were obtained as with the full sample of students. One major exception was that participation in a 21st CCLC program did not have a statistically significant effect on participant's reading proficiency level in 2010-2011.

The following trends in statistically significant achievement outcomes emerged in reading over the past three years (2008-2009 to 2010-2011) (see Table 2).

- The impact of prior-year achievement was positive and large for both proficiency and standardized SOL scaled score outcomes in each of the three years, with higher achievement in the prior year translating into higher performance in the current year.

- The impact of participation in 21st CCLC was negative for standardized SOL scaled score outcomes in both 2009-2010 and 2010-2011, but the magnitude of effects was not substantively important based on WWC guidelines.

Table 2. Achievement and Demographic Outcomes Summary in Reading for Grades 3-8

	Reading 2008-2009		Reading 2009-2010		Reading 2010-2011	
Predictor	**Proficiency**	**SOL**	**Proficiency**	**SOL**	**Proficiency**	**SOL**
Prior Achievement	Positive	Positive	Positive	Positive	Positive	Positive
Group				Control Higher	Control Higher	Control Higher
Gender		Female Higher	Female Higher	Female Higher	Female Higher	
Students with a Disability (SWD)		Non-SWD Higher	Non-SWD Higher	Non-SWD Higher	Non-SWD Higher	Non-SWD Higher
LEP						
Economically Disadvantaged	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher
Grade	MC	MC		Positive		
Black	Lower	Lower	Lower	Lower	Lower	Lower
White	MC		Reference[1]	Reference[1]	Reference[1]	Reference[1]
Hispanic		MC			Lower	
Other Races	Reference[1]	Reference[1]			Higher	Higher
Group x SWD Interaction		NA		NA		NA
Group x LEP Interaction		NA	Odds for LEP vs. non-LEP for 21st CCLC higher than controls	NA		NA
Group x Economically Disadvantaged Interaction						

Note: Only outcomes listed in the Proficiency and SOL columns were statistically significant.
MC: Could not be included due to technical issues with the data (multicollinearity)
NA: Interactions not tested for SOL
1 The reference group is the group to which the remaining racial/ethnic groups are compared.

Results of the descriptive analysis of reading outcomes for students in grade three who did not have prior-year test scores available showed that for proficiency outcomes, the percentage of 21st CCLC participants scoring Proficient or Advanced in reading in 2010-2011 was lower than nonparticipants and the Commonwealth overall and for all available subgroups. In terms of SOL scaled score outcomes, the mean reading SOL scaled score for 21st CCLC participants in 2010-

2011 was lower than that of nonparticipants overall and for all subgroups with the exception of students with disabilities (where the percentages were equal).

The "Virginia 21st CCLC 2010-2011 Third-grade Descriptive Analysis" section of the Supplemental Technical Report provides details on the participant, nonparticipant, and overall Virginia samples, and also details differences in reading proficiency and mean SOL assessment scaled scores in both 2009-2010 and 2010-2011 for these two different sets of third-grade students. As noted in that section, it is not appropriate to look at changes (either positive or negative) across years in either proficiency or scaled scores between the two third-grade cohorts, as those changes can be misleading since there is essentially no overlap between these two groups.

Objective 2: Improve Student Academic Achievement in Mathematics.

For all students in grades three through eight who attended a 21st CCLC program for at least 30 days, the proficiency and scaled score analyses showed statistically significant negative impacts of 21st CCLC participation on Virginia mathematics assessments. In particular, after controlling for prior-year proficiency, student demographics, and center characteristics, control students had over twice the odds of scoring proficient in mathematics in 2010-2011 compared to 21st CCLC participants, and had an average standardized mathematics SOL scaled score that was .246 standardized scaled score points higher in 2010-2011. Using WWC guidelines, the Cox's log odds ratio index effect size based on the two times higher odds for proficiency for control students would be -0.53, a "substantively important" effect. The Hedges's *g* effect size for the standardized SOL scaled score difference would be -0.26, a substantively important effect. Furthermore, none of the impacts of participation by subgroup (students with a disability, students with limited English proficiency, or by economically disadvantaged status) were statistically significant.

For the additional proficiency analysis using the mathematics standardized SOL scaled score student sample, very similar results were obtained to those using the full sample of students, including the fact that the odds for scoring proficient in mathematics for control students were over twice those of 21st CCLC participants.

The following trends in statistically significant achievement outcomes emerged in mathematics over the past three years (see Table 3).

- As with reading, the impact of prior-year achievement was large and positive for both proficiency and standardized SOL scaled score outcomes in 2008-2009, 2009-2010, and 2010-2011, with higher achievement in the prior year translating into higher performance in the current year.
- There were no statistically significant impacts of participation in 21st CCLC for any of the three demographic groups (students with a disability, students with limited English proficiency, or by economically disadvantaged status) in either proficiency or standardized SOL scaled score outcomes in any of the three years.

The results of the grade-three-only analyses of categorical data showed that the percentage of 21st CCLC participants scoring Proficient or Advanced in mathematics in 2010-2011 was higher than both nonparticipants and the Commonwealth for three of the available subgroups (American Indian or Alaska Native, economically disadvantaged, and students with disabilities). Meanwhile, the percentage of 21st CCLC participants scoring Proficient or Advanced in mathematics in 2010-2011 was lower than both nonparticipants and the Commonwealth overall and for almost half of the available subgroups. For SOL scaled score outcomes, the mean reading SOL scaled score for 21st CCLC participants in 2010-2011 was lower than that of nonparticipants overall and for all subgroups with the exception of African-American students and students with disabilities, where 21st CCLC participants outperformed nonparticipants.

For the details on the participant, nonparticipant, and overall Virginia samples and for the details of differences in mathematics proficiency and mean SOL scaled scores in both 2009-2010 and 2010-2011 for these two different sets of third-grade students, refer to the "Virginia 21st CCLC Third-grade Descriptive Analysis" section of the Supplemental Technical Report. As noted in that section, it is not appropriate to look at changes (either positive or negative) across years in either proficiency or scaled scores between the two third-grade cohorts, as those changes can be misleading since there is essentially no overlap between these two groups.

Table 3. Achievement and Demographic Outcomes Summary in Mathematics for Grades 3-8

	Mathematics 2008-2009		Mathematics 2009-2010		Mathematics 2010-2011	
Predictor	**Proficiency**	**SOL**	**Proficiency**	**SOL**	**Proficiency**	**SOL**
Prior Achievement	Positive	Positive	Positive	Positive	Positive	Positive
Group					Control Higher	Control Higher
Gender					Female Higher	
Students with a Disability (SWD)		Non-SWD Higher	Non-SWD Higher	Non- SWD Higher	Non-SWD Higher	Non-SWD Higher
LEP	Non-LEP Higher	Non-LEP Higher			LEP Higher	LEP Higher
Economically Disadvantaged	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher	Non-ED Higher
Grade/Test Level	MC	MC		Positive	Positive	Positive
Black	Lower	Lower	Lower	Lower	Lower	Lower
White	MC	MC	Reference[1]	Reference[1]	Reference[1]	Reference[1]
Hispanic				Lower		
Other Races	Reference[1]	Reference[1]			Higher	Higher
Group x SWD Interaction		NA		NA		NA
Group x LEP Interaction		NA		NA		NA
Group x Economically Disadvantaged Interaction						

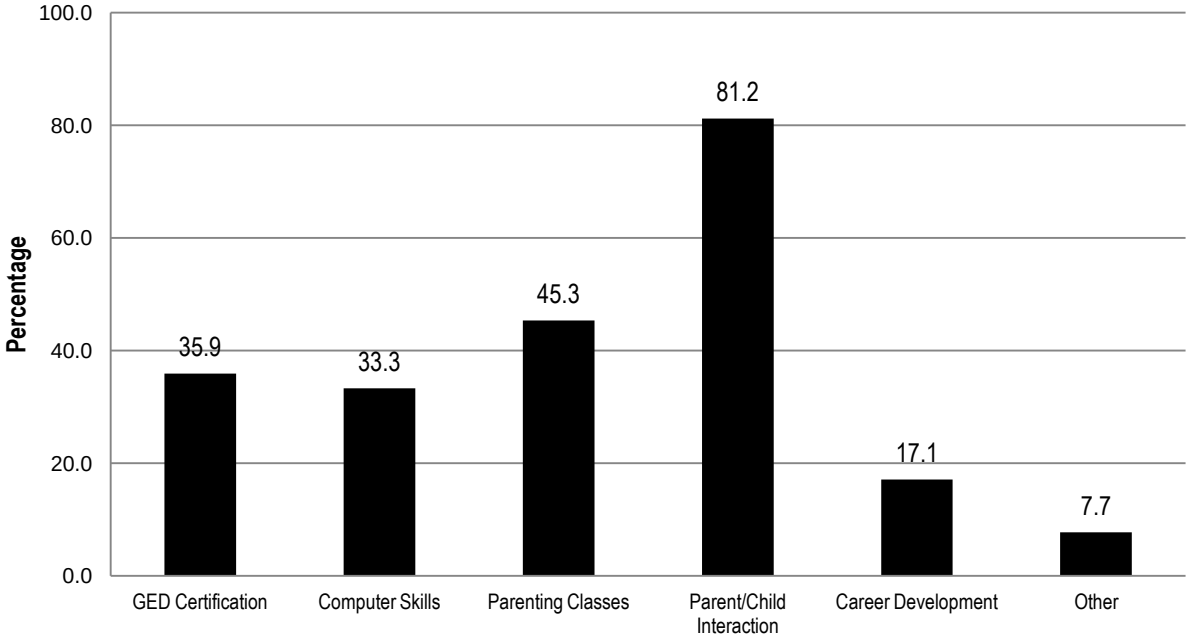
Note: Only outcomes listed in the Proficiency and SOL columns were statistically significant.
MC: Could not be included due to technical issues with the data (Multicollinearity)
NA: Interactions not tested for SOL
[1] The reference group is the group to which the remaining racial/ethnic groups are compared.

Objective 3: Provide Opportunities for Parental Education.

Center administrators stated that they provided a variety of activities to meet this objective. Over eighty percent of centers in 2010-2011 reported implementing activities that invited parent/child interaction (81.2 percent), returning to levels reported in 2008-2009 (83.5 percent) after the dip in 2009-2010 (67.9 percent). Parenting classes were reported as being conducted in almost half (45.3 percent) of the centers, decreasing from levels reported in the prior year (58 percent) back to levels reported in 2008-2009 (47.7 percent). These and other selected parent activities are shown in Figure 6. The most common activities cited by the centers during 2010-

2011 are discussed below. It is important to note that grantees determined their own criteria for success in meeting parental education objectives and reported their outcomes accordingly.

Figure 6: Percent of 21st CCLC Selecting Parent Education Subobjectives for 2010-2011



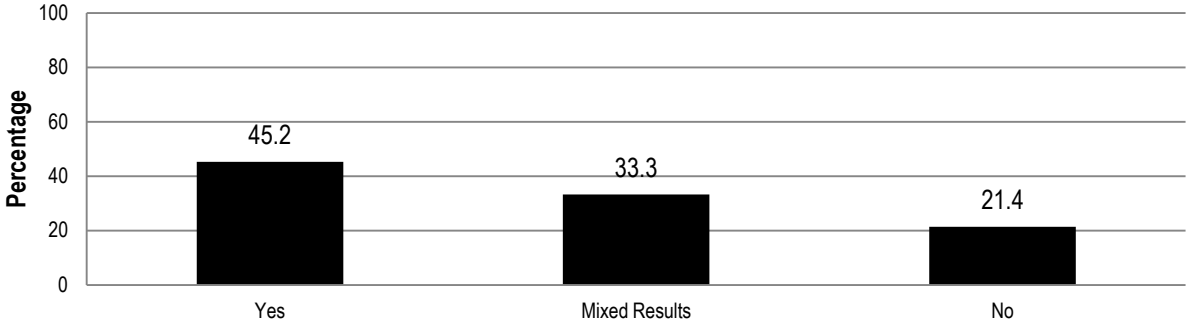
General Education Development

Of those centers providing a General Education Development (GED) certificate program, 66.7 percent reported scheduling the GED certificate program classes at the center, while 54.8 percent reported referring parents to GED certification programs in the community. To determine whether centers had met the GED subobjective by providing a GED certificate program (whether in-house or outside the center), 76.2 percent of centers used an attendance report, and a similar proportion used the number of certificate recipients (71.4 percent). Figure 7 shows the percentage of centers that reported meeting the GED subobjective. The percentages are based on the number of centers that chose to include the subobjective of "providing a GED certificate program."

Almost half (45.2 percent) of the centers providing a GED certificate program reported meeting this subobjective. Some grantees indicated that GED program sign-up and attendance were inconsistent due to scheduling conflicts with other family services of interest, including English language and computer skill classes, as well as some difficulty in reaching parents by letter or phone call. A few grantees reported that several family members asked to be referred to

GED programs outside of centers or within the school system because of employer support or scheduling conveniences.

Figure 7: Percent of 21st CCLC Reporting Meeting the Objective for Parent Participation in GED Certificate Program Classes for 2010-2011

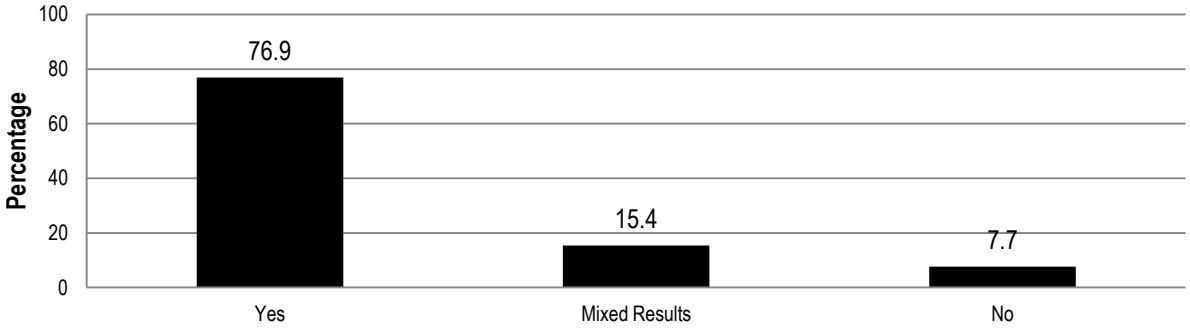


* Centers reporting "Mixed Results" indicated in open-ended remarks that, while some parents were successful in the GED program, participation fluctuated due to inconsistent work availability during the unstable economy.

Computer Instruction for Parents

Computer skills classes were reported to be offered by 87.2 percent of centers that provided computer usage activities. About one-third of centers reported developing projects integrating computer use for parents and children to complete together (30.8 percent). Other centers (12.8 percent) offered open-use computer labs and workshops on Internet safety, homework and SOL resources, and computer parts and functions. Centers that provided computer usage activities reported using a variety of measures to determine whether they had met this subobjective, including attendance reports (84.6 percent), records of the numbers of sessions offered (76.9 percent), and pre/post skills assessments (30.8 percent). Several grantees indicated that regular attendance was difficult for many parents due to work and other commitments, but that computer skills and understanding increased for family members who did attend, as measured by pre and post assessments. Figure 8 shows the percentage of centers that reported meeting the computer skills subobjective based on the number of centers that chose parent participation in computer skills classes as an objective.

Figure 8: Percent of 21st CCLC Reporting Meeting the Objective for Parent Participation in Computer Skills Classes for 2010-2011

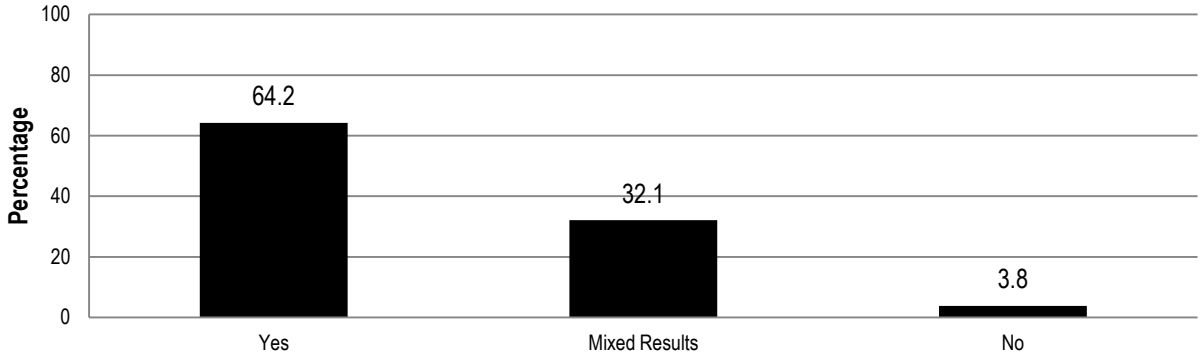


* Centers reporting "Mixed Results" indicated in open-ended remarks that participation varied due to work schedules.

Parenting Skills

Parenting skills classes were provided by 83 percent of centers that completed ALERT. The use of community speakers was reported by 54.7 percent of the centers. Topics offered included an orientation to the school, the afterschool program, and the parent portal; homework, studying, and testing anxiety; adolescent brain development; effective communication with teens; how to motivate teens; effective and positive discipline; bullying and understanding the dangers of social networking; sibling rivalry; helping teens build healthy relationships; substance abuse and pregnancy prevention; and preparing for college. Other centers (17 percent) offered an on-site counselor, health and wellness programming, literacy programming, financial literacy programs, education reentry programs, and leadership activities and opportunities for parents to organize and participate in community service projects. Centers that offered parenting skills classes reported using a variety of data sources to determine whether they had met this subobjective, including records of the number of sessions offered (92.5 percent), attendance reports (71.7 percent), and evaluation forms completed by parents (24.5 percent). Figure 9 shows the percentage of centers that reported meeting the parenting skills subobjective based on the number of centers that chose parent participation in parent training classes as an objective.

Figure 9: Percent of 21st CCLC Reporting Meeting the Objective for Parent Participation in Parent Training Classes for 2010-2011

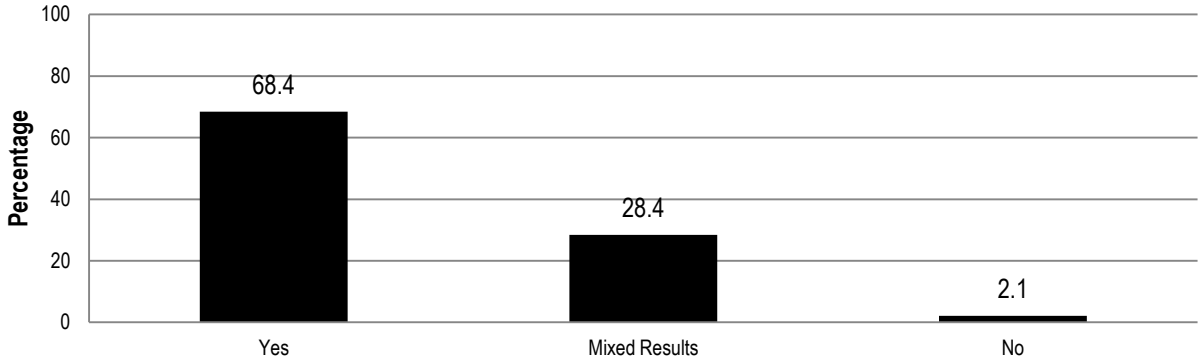


* Centers reporting "Mixed Results" indicated in open-ended remarks that participation was low to moderate, about 8-15 family members, for most training classes. One center reported that a partner-provided four week intensive on-going class had higher sustained participation than the center's periodic workshops.

Parent/Child Activities

Opportunities for parent/child interaction in academic activities were offered in 73 percent of reporting centers. Most of these centers offered family nights with parent/child activities (91.6 percent), and many held open houses for parents to learn about their children's work (76.8 percent). Some offered parent training in homework help (37.9 percent) or take-home projects for parent/child completion (21.1 percent). Other activities reported included book fairs and family literacy nights, character-building programs, family wellness programs, game nights, movie nights, field trips, and community events. Centers that offered opportunities for parent/child interaction in academic activities reported using a variety of data sources to determine whether they had met this subobjective, including attendance reports (85.3 percent), the number of sessions offered (78.9 percent of centers), and evaluation forms completed by parents (26.3 percent). Figure 10 shows the percentage of centers that reported meeting the parent/child interaction in academic activities subobjective based on the number of centers that chose parent/child interaction in academic activities as an objective.

Figure 10: Percent of 21st CCLC Reporting Meeting the Objective for Parent/Child Interaction in Academic Activities for 2010-2011

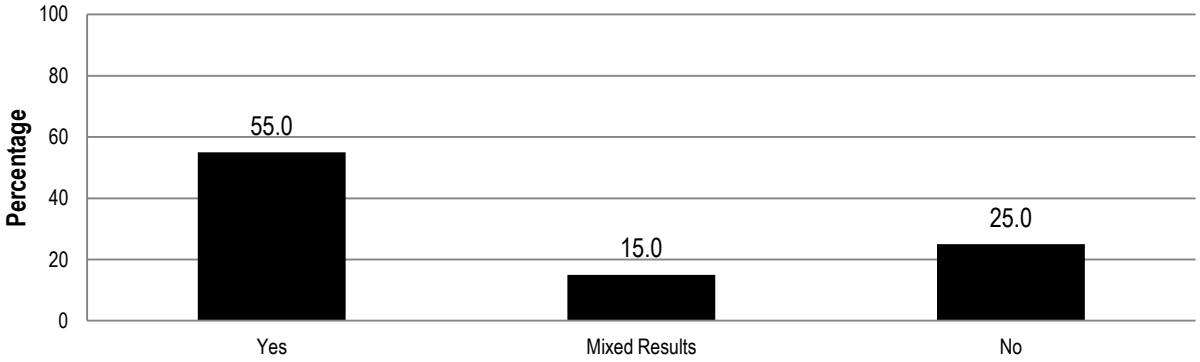


* Centers reporting "Mixed Results" indicated in open-ended remarks that parent participation was lower in some events than expected and reflected that follow-up and steady communication were also needed in order for involvement to improve.

Career Development for Parents

Parent career development was selected as a subobjective by 14.3 percent of the reporting centers. The centers that addressed this area most frequently offered career exploration classes (60 percent) and job application assistance sessions (35 percent). Centers that reported career development as a subobjective used a variety of data sources to determine whether they had met this subobjective, including records of the number of sessions offered (60 percent), attendance reports (55 percent), evaluation forms completed by parents (25 percent), and other sources (30 percent), including feedback from students to counselors, evaluation forms completed by students and teachers, and pre/post career knowledge assessments. Figure 11 shows the percentage of centers that reported meeting the career development subobjective based on the number of centers that chose parent participation in career development activities as an objective.

Figure 11: Percent of 21st CCLC Reporting Meeting the Objective for Parent Participation in Career Development Activities for 2010-2011



* Centers reporting "Mixed Results" indicated in open-ended remarks that it is difficult to involve parents in these types of sessions because of the type of work that most parents do and because of the high rates of unemployment among parents.

Table 4 shows the comparative success that centers reported having in meeting parent education subobjectives. It is important to note that grantees determined their own criteria for success in meeting parental education objectives and reported their outcomes accordingly.

Table 4. Percentage of Centers Meeting Parent Education Subobjectives in 2010-2011

Subobjective	Offered (percent)*	Met (percent)*	Mixed Results (percent)*	Did Not Meet (percent)*
General Education Development	35.9	45.2	33.3	21.4
Computer Skills Instruction	33.3	76.9	15.4	7.7
Parent Training	45.3	64.2	32.1	3.8
Parent/Child Interaction Activities	81.2	68.4	28.4	2.1
Career Development	17.1	55.0	15.0	25.0

***Percentages may not add up to 100 percent because some centers did not respond to this item.

Associations between Center Characteristics and Outcomes

This section of the evaluation includes the results of statistical analyses of associations between various categories of center-level data and reading and mathematics outcomes of students in grades 3-8 with two years of assessment data available. These analyses provide information that may be useful to program leaders and are summarized below.

For each of the past four analysis years (2007-2008 to 2010-2011), there has been a decrease in the total number of unique activities that the centers have offered. Both the mean (i.e., average) number of unique activities and the total number of providers have fluctuated over the past four years, but have had an overall downward trend as well. The 2007-2008 year had the

highest total number of unique activities, the highest mean number of activities, and the second largest number of providers. The 2008-2009 year had the largest number of providers and the second highest total number of unique activities, while the 2010-2011 year had the lowest total number of unique activities, as well as the lowest number of providers. The "Results for Grades 3-8" section of the separate Supplemental Technical Report provides more detailed, statistically oriented findings on the center-level outcomes.

The association between center characteristics and reading achievement

The number of days attended was not shown to be a statistically significant predictor of either reading proficiency level or standardized reading SOL scaled score outcomes. Only one of the additional center-level variables, number of activities, was a statistically significant predictor of reading standardized SOL scaled scores, but the impact was small. For each center activity added, there could be an expected increase of .003 standardized SOL scaled score points in reading. The total number of hours that centers were open, the number of paid school-day teachers, and the total number of hours of activities at centers all had a positive, but very small and nonstatistically significant impact on students' reading outcomes in 2010-2011.

Based on the additional analysis of reading proficiency outcomes using the sample of students who took the SOL only, as with the proficiency analysis using the full sample, none of the center-level variables were statistically significant predictors of reading proficiency.

In a separate set of analyses for students with one or more days of attendance, there was a statistically significant negative correlation between days attended and 2010-2011 reading z-scores, with more days of attendance being associated with a decrease in the standardized reading SOL scaled score, although the magnitude of the relationship (r = -0.54) was moderate. There was no statistically significant relationship between days of attendance and 2010-2011 z-scores in reading for students with 30 or more days of attendance (r = -0.029), but the relationship again was negative.

Overall, the following trends in statistically significant center-level impacts on reading achievement emerged over the past three years (Table 5).

- For the impact of total hours centers were open, there were mixed results on standardized SOL scaled score outcomes, with an increase in total hours having a small positive impact in 2008-2009, a small negative impact in 2009-2010, and no impact in 2010-2011.
- An increase in the number of paid school-day teachers led to a small increase in standardized SOL scaled score outcomes in both 2008-2009 and 2009-2010, but there was no impact in 2010-2011.
- The total hours of activities had no statistically significant impact on either reading proficiency or standardized SOL scaled score outcomes in any year.
- The total number of activities had small, but positive impacts on standardized SOL scales scores in both 2009-2010 and 2010-2011.
- An increase in the number of days attended was associated with a small increase in standardized SOL scaled score outcomes in both 2008-2009 and 2009-2010, but not in 2010-2011.

Table 5. Center-Level Outcomes Summary in Reading for Grades 3-8

	Reading 2008-2009		Reading 2009-2010		Reading 2010-2011	
Predictor	**Proficiency**	**SOL**	**Proficiency**	**SOL**	**Proficiency**	**SOL**
Total Hours Open		Positive	Negative	Negative		
Number of Paid School-Day Teachers	Positive	Positive		Positive		
Total Hours of Activities						
Total Number of Activities	Negative			Positive		Positive
Number of Days Attended		Positive	Positive	Positive		

Note: Only outcomes listed in the Proficiency and SOL columns were statistically significant.

The association between center characteristics and mathematics achievement

Three center-level variables: total hours open, number of paid school-day teachers, and days attended were statistically significant predictors of mathematics achievement outcomes in 2010-2011. However, the impact for each was very small. For each additional hour open, there was a .006 increase in standardized SOL mathematics scaled scores. Every additional paid school-day teacher added was associated with a one percent increase in the odds of scoring proficient in mathematics 2010-2011. Finally, each additional day of participation in 21st CCLC was

associated with a one percent increase in the odds of scoring proficient in mathematics in 2010-2011.

As with the proficiency analysis using the full sample, for the sample of students who took the SOL only, the number of days students participated in 21st CCLC programs was statistically significant, but had a very small positive impact on mathematics achievement, with a one percent increase in the odds of scoring proficient in 2010-2011 for each additional day of participation in 21st CCLC. However, the number of paid school-day teachers was no longer a statistically significant predictor of mathematics proficiency in 2010-2011.

In addition, there was no statistically significant correlation between days attended in 21st CCLC and 2010-2011 z-scores in mathematics for either those with (1) one or more days of attendance (r = -0.002) or (2) 30 or more days of attendance (r = 0.019). The "Results for Grades 3–8" section of the separate Supplemental Technical Report provides more detailed, statistically oriented findings on the center-level outcomes.

The following trends in statistically significant center-level impacts on mathematics achievement outcomes were evident over the past three years (see Table 6).

- As with reading, there were mixed results for increases in the total hours centers were open, with a positive impact for both proficiency and standardized SOL scaled score outcomes in 2008-2009, a negative impact for both proficiency and standardized SOL scaled score outcomes in 2009-2010, and a positive impact on standardized SOL scaled score outcomes only in 2010-2011. However, all impacts were small.
- The number of paid school-day teachers had small positive effects on mathematics proficiency in both 2008-2009 and 2010-2011.
- An increase in the number of days attended led to a small increase in proficiency outcomes in all three years.

Table 6. Center-Level Outcomes Summary in Mathematics for Grades 3-8

Predictor	Mathematics 2008-2009		Mathematics 2009-2010		Mathematics 2010-2011	
	Proficiency	SOL	Proficiency	SOL	Proficiency	SOL
Total Hours Open	Positive	Positive	Negative	Negative		Positive
Number of Paid School-Day Teachers	Positive	Positive			Positive	
Total Hours of Activities		Negative				
Total Number of Activities			Positive	Negative		
Number of Days Attended	Positive	Positive	Positive		Positive	

Note: Only outcomes listed in the Proficiency and SOL columns were statistically significant.

Promising Practices and Challenges

As part of the self-reporting information provided in ALERT, grantees were asked to provide comments regarding activities they felt were most effective in helping them to meet program objectives, factors that could have been associated with lower results for objectives not met or showing mixed results, and recommendations they might have for improving the program in their centers in the future. From these comments, several themes emerged, indicating promising practices and challenges faced by the centers. These themes are summarized below by category.

Promising Practices

Grantees were asked to elaborate upon their centers' objectives that were met and the activities or promising practices that appeared to be most effective in helping them to meet these objectives. Major themes appearing in grantees' responses included the following: homework help and tutoring with nontraditional instructional curricula, including computer-based and project-based programs; family services and interactive activities; enrichment activities that enhance student engagement; caring and committed afterschool staff who maintain strong linkages with school staff; supportive structure and environment for learning; and strong partnerships, including cultural and community-based services, field trips, and mentorships. These promising practices are each described in further detail below.

Homework help and tutoring with nontraditional instructional curricula, including computer-based and project-based programs

Many grantees attributed improvements in student academic achievement with programs featuring homework help and tutoring, provided before or after school. Components of these

programs that were perceived to be particularly strong included one-on-one and small-group learning, technology integration, hands-on activities, and homework monitoring. At some centers, homework completion was required before students were allowed to participate in other center activities. At other centers, remediation was provided by the school-day teachers in their own classrooms. Increases were noted in both homework completion and SOL performance. Several grantees commented that the homework help and tutoring time was also valuable for teachers to bridge positive relationships with their students. In addition to instructor-led homework help and tutoring, several grantees reported using computer-based academic instructional programs with project-based learning modules designed to target skills deficits in math and reading. Examples cited include Achieve3000, FASTT Math, First In Math's "24 Game," Odysseyware, Plato, Quick Reads, and Study Island.

Family services and interactive activities

One grantee commented that the center showcases "helped to open the door to many parents" and also attributed positive feedback from students regarding their programs and staff to parents' feeling more welcome at centers and wanting more to stay involved. Other centers required parents to sign out their children each day, and this policy is attributed to increases in both student program attendance and parent engagement. Other practices noted by grantees to be promising in increasing parent engagement and family interaction included parent nights highlighting participant involvement; checklists sent home for students and parents to complete together; food and other incentives; guest authors; student demonstrations and performances; and community nights combining student showcases with adult education. Parent and adult services noted to be particularly effective and helpful for families include bilingual activities and intake interpreters, an in-house GED program, nontraditional evening and weekend educational programs, "real-life" guidance, the Families and Schools Together (FAST) program, the Parents as Educational Partners (PEP) course, and partnering with CLEAN, Inc. for family sessions. Providing a variety of opportunities, keeping participation in afterschool extracurricular activities open to any family member of participating students, and building and maintaining strong communication channels with parents were general practices and policies noted to also be of benefit to increasing family engagement.

Enrichment activities and incentives that enhance student engagement

Grantees used enrichment activities to encourage wellness and instill positive student behavior, as well as to motivate, supplement, and enhance student learning. Many grantees reported providing a "holistic program" with a variety of opportunities and workshops aimed at benefitting participants' academic, emotional, social, and physical well-being. Enrichment activities cited by grantees included hands-on learning activities such as art, community service, cooking, creative writing and mass media activities, drama, language learning, magic, pottery, the micro society framework, and robotics; workshops on health and nutrition, non-violent conflict resolution, and violence prevention; sports activities such as boxing, martial arts, and zumba; and field trips to cultural locations and other local community venues. Several grantees stated that their enrichment offerings were effective in enticing their students to stay after school for the tutoring that took place before the enrichment activities. Offering a variety of enrichment activities and field trips and providing transportation home from them helped to maintain student interest in the afterschool program and provided the participants with opportunities to participate in unique experiences that were unavailable to them or were more difficult to have at home. Some centers reported using participation in enrichment activities as a direct incentive for attendance, homework completion, and other positive student behaviors. Prizes and other incentives were also reported to be an effective promising practice in increasing student attendance. Students at some centers were said to be excited about the attendance incentives. Providing incentives was considered to be an important promising practice because, in the words of one center's administrator, "If they attend, we can teach them."

Caring and committed afterschool staff who maintain strong linkages with school staff

A number of grantees described qualities in their afterschool and school-day staff that strengthened their afterschool programs. Staff-related practices reported to contribute to the success of center objectives included consistency, mentorship, certified classroom teacher participation inside and outside of the classroom, and a high rate of differing modes of communication with participants. Tutoring staff were highly qualified instructors, including many licensed school-day teachers. Staff were said to be committed to helping students and to serve as positive adult role models for them. It was reported that some school-day teachers were motivated by the opportunity to build on their relationships with their students on a different level, thereby having better connections with them in class. In general, center and affiliated

school staff were reported as being caring individuals, who got involved with families, making sure to maintain contact with families, so that they would attend and would continue to attend after they graduated the program. It was reported that staff members worked well together as teams, both within the center and with school staff and community partners.

Supportive structure and environment for learning

At some centers, before and afterschool care was offered through community partnerships so as to accommodate the needs of working parents. At other centers, library hours were extended to accommodate busy family schedules. At one center, the afterschool library hours included opportunities for instruction and practice with computer applications on SMART Boards, laptops, and e-readers, resulting in a measurable increase in technological skill fluency. At another center, social media applications (e.g., Facebook) and text messaging were used to facilitate communication. Other grantees reported making specific efforts to target at-risk and transitioning student populations through their recruitment strategies and summer programs. Grantees described their efforts to create a learning community with their students and the pivotal role of mentors in shaping this environment. Grantees also indicated the importance of providing a safe, quiet, dedicated space with staff and volunteer support and encouragement for learning. Arrangements reported as being effective in reaching at-risk learners included having a structured daily schedule with dedicated time for sustained reading, focused instructional time, and alternating math and reading throughout the week. At some centers, a bullying policy was distributed to each child and parent, requiring signatures from both parties, and a detailed discipline policy was created and implemented. At other centers, success in improving student work/study habits was attributed to the implementation of the strategies and actions involved in positive behavior supports.

Strong partnerships, including cultural and community-based services, field trips, and mentorships

Grantees reported that one of the most effective practices in creating and maintaining strong afterschool programs was communicating on a regular basis with school administration, teachers, and community partners about needs, goals, strategies, implementation, and sustainability. Partners who were contacted regularly were more eager to participate when approached at a later date. Strong community partnerships allowed many grantees to provide services and experiences that extended their programs' reach in meeting the needs and interests of their students and families. At some centers, academically-based cultural field trips and guest speakers were

provided through partnerships with art museums and science and technology centers to reinforce SOL objectives and appropriate behavior. Partnerships with local school districts and universities allowed centers to offer instruction, free of charge to participants, in computer literacy, GED, and service learning. Local community service providers offered workshops and programs in character education, parenting skills, healthy relationships, cyber safety, and anger management, as well as various prevention programs, related to topics such as teen pregnancy, dating violence, and alcohol and drug abuse. Partnerships with other community centers allowed centers to provide fitness programs, reading programs, and enrichment activities for students and families.

Challenges

Grantees were asked to reflect upon their centers' objectives that were not met or showed mixed results and to identify challenges that might have been associated with the lower results. Major challenges appearing in grantees' responses included the following: low or inconsistent parent attendance; low or inconsistent student attendance; and difficulty maintaining alignment, engagement, and continuity with school day activities. Challenges appearing less frequently included maintaining partnership continuity, issues related to afterschool staffing, issues related to planning and communication with families, and issues related to student discipline. These challenges are each described in further detail below. Transportation, scheduling, space availability, and other logistical concerns, as well as communication with afterschool staff and partners, were generally reported less frequently than prior years.

Low or inconsistent parent attendance

Similar to prior years, the predominant challenge reported in 2010-2011 concerned low or inconsistent parent involvement. At some centers, parent attendance was higher for family picnics and for events during which students demonstrated what they had learned than it was for parent training or other parent education classes. At most centers, despite offers of food, parents more often sent their children to the family interaction events but did not attend themselves, primarily due to busy schedules but also due to lack of interest. The normal operational hours of centers were often not flexible enough to accommodate parents' work schedules and their children's sports and other activity schedules. Lack of transportation was cited both as a factor contributing to low parent attendance as well as a solution that, whether by itself or paired with food incentives, did not produce the desired increases in parent participation. Poor literacy skills, negative personal experiences associated with the social stigma of not possessing a high school

diploma, and low self-esteem were also attributed to parents' apprehension about signing up for and attending GED classes. Grantees stated that they would increase their outreach and communication efforts in order to better ascertain parent needs and build better rapport with parents to help them overcome their misgivings.

Low or inconsistent student attendance

Several grantees indicated that regular attendance of students was a challenge, both at their centers and at schools during the school day. Grantees reported that some students lived outside the school zone and relied on parents or other public transportation to get to school. Sickness, family emergencies, and transience were additional reasons given for student absences after school. Less than total buy-in from feeder school administrative and teaching staff and competition from other formal school activities, such as sports and clubs, were also said to detract from program attendance. Older students and students in special education were cited as being particularly difficult to recruit and retain. Some grantees indicated improvements when students were given their choice of activities in which to partake, when their team won the Quiz Bowl, and when they received other incentives from the program.

Alignment, engagement, and continuity with school day activities

Although a number of grantees stated that, in some cases when major improvements in grades were not made, students were already performing well academically, other grantees indicated that improvements were still needed in their programs' alignment with the remediation needs of struggling students, the language needs of immigrant families, the reading SOL, and the school-day science and social studies curricula. Better communication between program staff and school-day teachers, along with more timely progress monitoring assessments and availability of results, were areas in which grantees stated that improvements would be made in order to fine-tune the alignment of remediation and focused tutoring sessions. More creative academic intervention and incorporation of both student choice and diversity in enrichment activity options were strategies suggested for increasing student engagement.

Maintaining partnership continuity

Logistical challenges related to maintaining partner relationships that grantees cited for the 2010-2011 program year included a lack of availability of partners for planning, coordinating the acquisition of needed documentation for reporting, and tardy or absent replies to communications sent out to partners. A few centers reported being faced with the problem of

their partners discontinuing services mid-year. A few other centers indicated difficulty in securing time and funding to provide for adequate sustainability beyond the grant period.

Issues related to afterschool staffing

Afterschool staff turnover was a challenge for a few centers. Some had lost their regular teaching jobs, while others were moved to different grade levels or subjects. Still others decreased their involvement in the afterschool program because of burnout following a lengthened school-day. Finally, some afterschool staff members left the program because of high levels of student misbehavior.

Issues related to planning and communication with families

A few grantees reported having difficulty sustaining contact with parents. In some cases, the challenge came with the transient situations that many of the families faced. In addition, grantees reported that not all parents had e-mail or a phone. Several grantees indicated that they would make efforts to build stronger relationships with parents and increase their comfort level so that they would feel more encouraged to involve themselves in their children's learning. One grantee discussed how the eating habits of families at home and the lack of physical activity outside of school-sponsored activities contributed to the mixed results for the center's related objectives. On the planning side, grantees indicated that more programs were needed for parents, particularly those that encouraged parent-child interaction and involvement in education.

Issues related to student discipline

Student discipline was reported by a few grantees to be a problem after school. It was attributed to low student achievement as well as, in some cases, staff turnover or loss of partner support. Grantees indicated that they would address the issue by strengthening teachers' mentoring relationship with students so that teachers would be better able to determine the root causes of the poor behavior and appropriately address them.

Conclusions

Objective 1: Improve Student Academic Achievement in Reading

Based on the statistical analyses for grades three through eight that included two years of test data, participation in the 21st CCLC program was associated with statistically significant negative outcomes for all participants as a group in reading based on both proficiency levels and standardized SOL scaled scores, where participants underperformed control students. The effect size in reading for the proficiency level outcomes was substantively important, while the effect

size for the standardized SOL scaled score outcomes was not. There were no statistically significant impacts of participation in 21st CCLC in reading for any of the three subgroups analyzed (students with a disability, students with limited English proficiency, or by economically disadvantaged status). Furthermore, most center-level variables had very small, but non-statistically significant, positive impacts on both reading standardized SOL scaled scores and proficiency in 2010-2011. The only exception was the number of center activities, which had a very small, but statistically significant and positive impact on reading standardized SOL scaled scores.

However, it should be noted that the predictor variables included in the statistical analyses only explained 54 percent of the variance (i.e., variability) in 2010-2011 standardized SOL scaled score changes in reading. In other words, additional variables not able to be included in the SOL analyses (e.g., student motivation, parental involvement) are accounting for close to half of the variability in SOL reading achievement in 2010-2011. Meanwhile, the predictor variables included in the models provided for a good classification of students as either proficient or not proficient.

Objective 2: Improve Student Academic Achievement in Mathematics

Based on the statistical analyses for grades three through eight that included two years of test data, participation in the 21st CCLC program had a statistically significant negative impact on both mathematics proficiency and standardized SOL scaled scores, with control students outperforming participants. The effect sizes in mathematics for both the proficiency and standardized SOL scaled score outcomes were substantively important. Total hours open was the only center-level variable with a statistically significant impact on mathematics standardized SOL scaled scores, which was positive, but small. Meanwhile, both the number of paid school-day teachers and the number of days of participation in 21st CCLC program had small, statistically significant positive impacts on mathematics proficiency scores. The remaining center-level variables (total hours and total number of activities) had very small, but non-statistically significant positive impacts on both mathematics proficiency and standardized SOL scaled scores in 2010-2011.

However, it should be noted that the predictor variables included in the statistical analyses only explained 49 percent of the variance in 2010-2011 standardized SOL scaled score changes in mathematics. In other words, additional variables not able to be included in the SOL analyses

(e.g., student motivation, parental involvement) are accounting for nearly half of the variability in SOL mathematics achievement in 2010-2011. Similarly, the predictor variables included in the models only provided for a fair classification of students as either proficient or not proficient.

Objective 3: Provide Opportunities for Parent Education

As required by the 21st CCLC grant, centers offered General Education Development (GED) certificate programs, computer instruction, parenting skills classes, parent/child activities, and/or career development activities for parents. The majority of centers offering computer skills instruction reported having met their internally established subobjectives. In addition, about two-thirds of centers offering parent training reported having met their internally established subobjectives. A similar proportion of centers reported having met their internally established subobjectives for parent/child interaction in academic activities. Over half of centers offering career development activities reported having met their internally established subobjectives.

Overall, attending more days in the program did lead to increased achievement, but only for proficiency in mathematics. However, upon further investigation to help determine whether there is a cutoff for the minimum number of days of attendance that results in improved achievement, the outcomes did not suggest a way to establish such a cutoff. As with the findings related to days of attendance, future studies may want to look at the cost/benefit balance between increasing the number of hours open, the number of paid school-day teachers, and the number and total hours of activities and the impacts on achievement to help determine if there is a cutoff point where increases either do not affect or begin to hamper achievement. Such investigations could help to identify whether staff are stretched too thin or whether centers are trying to provide too many different types of activities to be effective.

In the case of analyses of achievement outcomes such as those conducted, it is not possible or practical to include all potential sources of influence in the statistical model, as the data available to include are limited to that which states are reasonably able to collect. In addition, as the analyses examined the effects of all centers combined, it could be that individual centers may have experienced gains in student achievement that were not evidenced in the aggregated analyses. Finally, the fact that some differences between treatment and control groups as a whole were not statistically significant does not mean that individual students did not make gains in achievement or that they did not have other positive experiences in 21st CCLC not measured by achievement test scores.

Appendix A: Supplemental Program Objectives

In addition to the state mandated 21st CCLC program objectives, some grantees chose supplemental objectives as part of their center activities. This Appendix provides information on the percentage of centers choosing each supplemental objective and the success centers reported in meeting these objectives.

Objective: Improvement of Student Behavior

The objective for improving student behavior was selected by 57.8 percent of centers that completed the ALERT. The percentage of centers selecting various subobjectives for this objective is shown in Table A-1. Success of the reporting centers in meeting these subobjectives is shown in Table A-2. Please note that grantees determined and self-reported their individual levels of success in meeting student behavior objectives based on their own criteria.

Table A-1. Percentage of Centers Selecting Subobjectives for Improving Student Behavior in 2010-2011

Subobjective	Percentage of Centers Selecting
Improve classroom behavior	87.8
Complete homework satisfactorily	85.1
Improve classroom participation	67.6
Improve class attendance	64.9
Improve motivation to learn	70.3
Improve ability to get along with other students	64.9
Other	0.0

Table A-2. Percentages of Success by Reporting Centers in Meeting Subobjectives for Improving Student Behavior in 2010-2011

Subobjective	Met (percent)	Mixed Results (percent)	Did Not Meet (percent)
Improve classroom behavior	73.8	26.2	0.0
Complete homework satisfactorily	76.2	22.2	0.0
Improve classroom participation	62.0	36.0	0.0
Improve class attendance	70.8	29.2	0.0
Improve motivation to learn	71.2	28.8	0.0
Improve ability to get along with other students	0.0	0.0	0.0

Objective: Provide Enrichment Opportunities

The objective for providing enrichment opportunities was selected by 93 percent of centers that completed the ALERT. The percentage of centers selecting various subobjectives for this objective is shown in Table A-3. Success of the reporting centers in meeting these subobjectives is shown in Table A-4. Please note that grantees determined and self-reported their individual levels of success in meeting enrichment opportunity objectives, based on their own criteria.

Table A-3. Percentage of Centers Selecting Subobjectives for Providing Enrichment Opportunities in 2010-2011

Subobjective	Percentage of Centers Selecting
Increase children's exposure to the fine arts and cultural events	70.6
Increase children's depth of understanding of academic subjects through nontraditional instruction	71.4
Increase children's health awareness and physical education	83.2
Provide programs in preventing drug/alcohol use and/or violence	41.2
Other	1.7

Table A-4. Percentages of Success by Reporting Centers in Meeting Subobjectives for Providing Enrichment Opportunities in 2010-2011

Subobjective	Met (percent)	Mixed Results (percent)	Did Not Meet (percent)
Increase children's exposure to the fine arts and cultural events	88.1	10.7	1.2
Increase children's depth of understanding of academic subjects through nontraditional instruction	89.4	9.4	1.2
Increase children's health awareness and physical education	88.9	10.1	1.0
Provide programs in preventing drug/alcohol use and/or violence	87.8	6.1	6.1

Objective: Improve Community Partnerships

The objective for improving community partnerships was selected by 56.3 percent of centers that completed the ALERT. The percentage of centers selecting various subobjectives for this objective is shown in Table A-5. Success of the reporting centers in meeting these subobjectives is shown in Table A-6. Please note that grantees determined and self-reported their individual levels of success in meeting community partnership objectives, based on their own criteria.

Table A-5. Percentage of Centers Selecting Subobjectives for Improving Community Partnerships in 2010-2011

Subobjective	Percentage of Centers Selecting
Increase the number of partners	45.8
Increase the activities of partners	63.9
Improve communication with partners	65.3
Improve the sustainability of the program through partner commitments beyond the grant period	44.4
Other	0.0

Table A-6. Percentages of Success by Reporting Centers in Meeting Subobjectives for Improving Community Partnerships in 2010-2011

Subobjective	Met (percent)	Mixed Results (percent)	Did Not Meet (percent)
Increase the number of partners	78.8	12.1	9.1
Increase the activities of partners	82.6	15.2	2.2
Improve communication with partners	91.5	8.5	0.0
Improve the sustainability of the program through partner commitments beyond the grant period	62.5	31.3	3.1